

# Chapter 1

## Introduction

### 1-1. Purpose

This manual provides doctrinal guidance for the employment and operations of the Signal Tactical Satellite (TACSAT) Company at echelons above corps (EAC) in a theater of operations. It also provides doctrinal guidance on the functions of the Tactical Satellite Communications Control Section (TSCCS) AN/MSQ-114 and the Defense Satellite Communications System (DSCS) ground mobile force (GMF) control link section. The manual is oriented towards communications support operations behind the corps rear boundary in a large theater of operations. However, it is not limited to any particular theater of operations. In certain situations, the TACSAT Company may be employed in the communications system of the combat zone.

### 1-2. References

Required and related publications are listed in the appendix.

### 1-3. Related manuals

This manual is one of seven manuals prepared by USAISC for communications doctrine at EAC. All seven volumes provide a comprehensive understanding of theater level communications.

*a.* FM 11–23 is the keystone manual which contains an overview of EAC communications. It provides a structure for a type Theater Communications Command (Army) (TCC(A)) and introduces the building block units which may be assigned to a TCC(A).

*b.* FMs 11–24 through 11–29 provide specific doctrinal guidance for the employment and operations of individual building block units (battalion and company size).

### 1-4. Explanation of abbreviations and terms

Abbreviations and special terms used in this manual are explained in the glossary

### 1-5. The Airland Battle

*a.* The U.S. Army must be prepared to meet a variety of challenges on battlefields worldwide. It must be prepared to fight both highly mechanized forces and light, well-equipped forces. In the areas of greatest strategic concern, the Army must expect

battles of greater scope and intensity than ever fought before. It must anticipate battles that include the use of nuclear, biological, chemical (NBC) warfare and electronic warfare (EW). To win, all available military forces must be coordinated in pursuit of common objectives. AirLand Battle doctrine provides the Army's basic operational concepts to meet these challenges. FM 100–5 describes the AirLand Battle doctrine.

*b.* AirLand Battle doctrine fuses the separate geographical areas of combat into one battle. It extends from our own rear areas, across the forward line of own troops (FLOT), deep into the enemy's second echelons and rear areas. The theater commander directs the battle by planning, integrating, and executing the deep battle; the actions in the main battle area and the rear battle. The following basic characteristics express the essence of the AirLand Battle which apply to all levels of command.

(1) Initiative is the ability to set the terms of battle by action. Commanders must seize and preserve the initiative. This generates an offensive spirit in the conduct of all operations.

(2) Depth refers to time, space, and resources. Commanders need to use the entire depth of the battlefield to strike the enemy. Depth of resources provides the commander great flexibility over large areas. These resources include the integration of ground and air operations.

(3) Agility means to act faster than the enemy. Commanders must learn of critical events as they occur and act swiftly to avoid enemy strength and exploit enemy weaknesses. This must be done repeatedly.

(4) Synchronization means achieving maximum combat power. Commanders must waste no effort, initially or as an operation develops. Operations must be synchronized with other services and allies.

*c.* Communicators must be aware that decision-making by battle commanders is extremely time critical. Our decision cycle must be less than that of the enemy. The range, scope, and support of operations is thus highly dependent on command and control. The AirLand Battle requires immediately responsive and highly reliable communications involving signal commanders and officers at all levels.

## 1-6. Theater Army communications

### *a. Theater Communications System (Army).*

(1) When the Army operates on a large land mass, the scope of combat forces, support services, and duration of involvement are increased significantly. Extended operations also introduce requirements for Navy and Air Force support, as well as an expanded administrative and logistical base. Each service usually provides its own support services and command structure to ensure the best possible support of its tactical commanders. The Army headquarters which provides this support is the theater Army (TA). The TA headquarters and its assigned units generally operate in the area to the rear of the corps boundary called the communications zone (COMMZ). The COMMZ can extend to the water's edge in a large land mass, across a major water body to another land mass, or even to the continental United States (CONUS).

(2) FM 100-16 provides a detailed discussion of support operations in EAC. It is the source of concepts and doctrine for EAC communications-electronics (C-E) TA operations and relates the C-E role to the command and control requirements of theater.

(3) FM 11-23 describes the Army's overall telecommunications system for command and control. The system is called the Army Automation Communications (ATUOCOMM) Network. The AUTOCOMM provides tactical, strategic, general support, and theater subnets. The theater subnet is called the Theater Communications System (Army) (TCS(A)). The TACSAT Company is employed in the TCS(A).

(4) Traditionally, the concepts and doctrine for a theater have been focused on Europe, with its combined and joint command structures. This thinking has led to heavy reliance on C-E support from the commercial services and facilities which exist in industrially developed central Europe. Communications plans and forces have become very dependent on such host nation support (HNS). Future United States (U. S.) military commitments could require the Army to operate in a variety of geographical environments.

(5) Vietnam and other recent experiences demonstrated the tremendous resources required to support ground combat in undeveloped regions. Multichannel radio played a major role in providing communications to dispersed units. Tropospheric scatter and satellite radio proved themselves important to theater command and control. Today's tactical satellite radio systems greatly enhance the flexibility and capacity of the theater communications.

They can be moved and put into operation more rapidly than their predecessors. Their area of coverage is greater than other multichannel radio system.

### *b. Army command and area communications system.*

(1) The TCS(A) provides both command and area communications. It consists primarily of command and area links in a nodal configuration called the Army Command and Area Communications System (ACACS).

(2) The ACACS provides service to the TA in the COMMZ on a common-user, geographical basis. TA headquarters is supported by the Signal Command Operations Battalion (Theater) (FM 11-28) and will access the ACACS through at least two area signal nodes. Major functional headquarters will be interconnected with TA headquarters through the ACACS. This procedure is accomplished through an extension node provided from the supporting major area node. The major area nodes and extension nodes are provided by the Signal Telecommunications Battalion (Area). The area nodal portion of the ACACS also provides C-E services to other units assigned to or transiting through the COMMZ.

(3) Figure 1-1 shows a representative ACACS found in the TCS(A). The ACACS can provide the high volume telephone, radio, and record copy services required by larger headquarters. Tactical satellite radio may be employed in either the command or the area portions of the communications systems. It can connect the TCS(A) to the strategic or tactical subnets of the AUTOCOMM network. The ACACS is required to interface with the Defense Communications System (DCS) in at least two locations. The corps area signal system will also interface with ACACS. See FM 11-23 for a more complete description of the services provided by the TCS(A).

### *c. TCC(A).*

(1) The TCC(A), which is designed on a building block principle, is a USAISC unit under the operational control of the TA commander. It provides communications for U.S. Army units throughout the COMMZ. The TCC(A) may be directed to provide C-E support to other U.S. and non-U.S. units, to include combined headquarters, and to provide some or all of the strategic networks in the theater. It also is responsible for supply and maintenance support for TCC(A) unique C-E, air traffic control (ATC) and navigational aids (NAVAIDS) equipment.

(2) Figure 1-2 shows a typical TCC(A). The types and number of building block units assigned can be changed to meet the C-E requirements. C-E requirements almost always exceed available

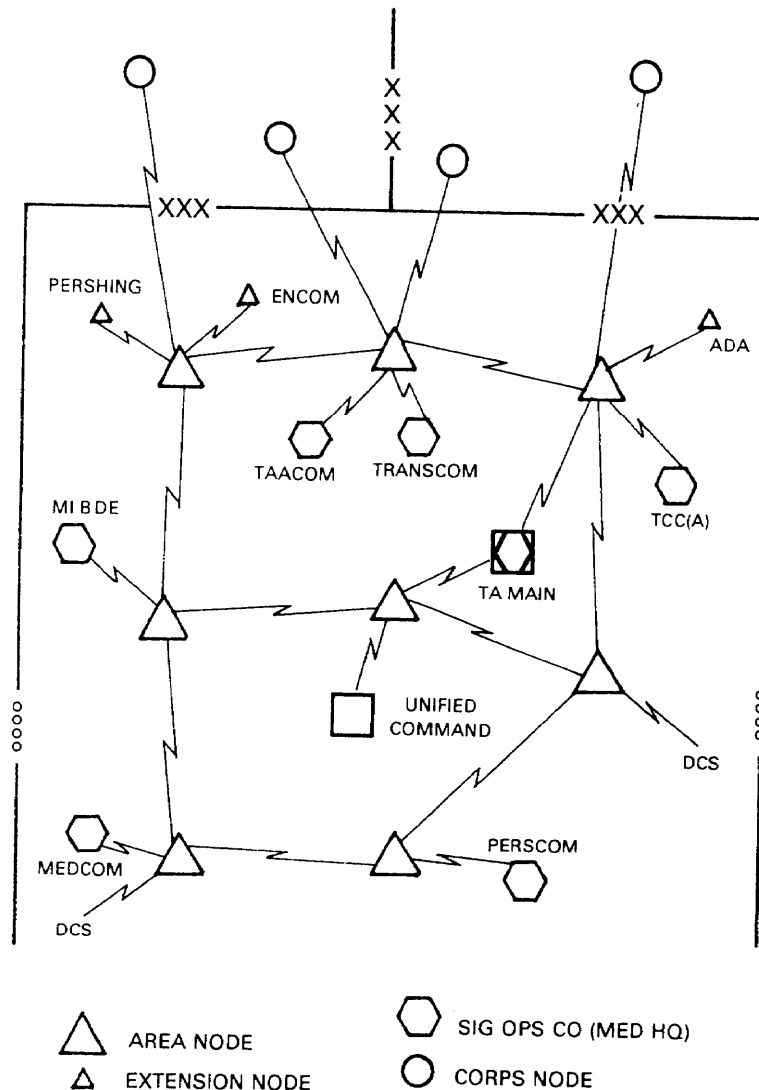


Figure 1-1. Army Command and Area Communications System

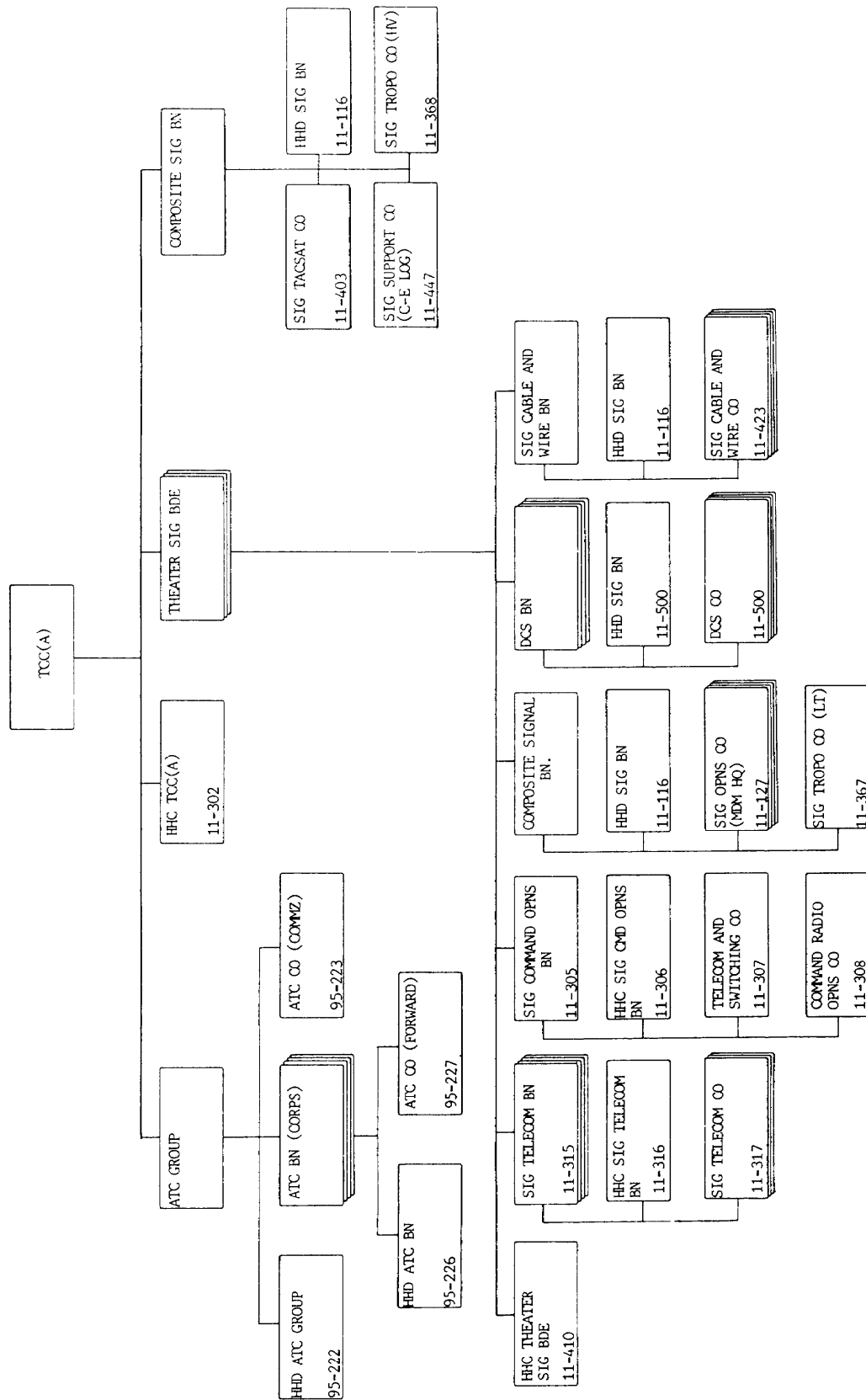


Figure 1-2. Type Theater Communications Command (Army)

resources. If a major conflict should occur, available resources will be severely taxed by current force restrictions. Very important, also, is the fact that our major opponents have made known their intention of disrupting the Army's support areas. C-E units will be primary targets of this threat and must be prepared to combat it effectively. A future war will not be fought only at the front; it will cover the breadth and depth of the entire theater in a simultaneous or nearly simultaneous series of actions.

(3) All these factors emphasize the need for detailed planning at each level within the TCC(A). Thorough planning and frequent practice is the only way to prepare for the surprises which occur in wartime. FM 11-23 provides detailed concepts and doctrine for the TCC(A). Generally, one TACSAT Company is assigned to a TCC(A). The TACSAT Company is an essential element in the theater subnet.

### 1-7. Echelons above corps support

EAC commanders must be prepared to operate in both joint and combined operations on the AirLand Battlefield. FM 100-16 includes broad doctrine concerning EAC support in both type operations and contingency deployment. Particularly in combined operations, command and control as well as intelligence collection and dissemination present unique problems. Nations are reluctant to relinquish sovereign rights in these areas. In all cases, C-E support must be specifically tailored to meet the support and operational requirements of the type theater of operations. Signal commanders and planners must be aware of this. These requirements are best understood in terms of the two typical EAC situations explained in FM 100-16. The two major scenarios in which the TCC(A) will be called upon to provide EAC support are discussed briefly in *a* and *b* below.

*a. Support to forward-deployed forces.* Support to forward-deployed forces normally involves combined operations. U.S. forces are predeployed in a foreign country and operate with allied nations in an established theater. The European North Atlantic Treaty Organization (NATO) and Korean Combined Forces Command (CFC) are examples wherein U.S. forces are forward-deployed in foreign countries. In both cases, an established formal allied command struc-

ture exists, HNS agreements exist, and a TCA(A) is in place. A forward-deployed situation provides the benefits of time, planning, and experience in a specific theater of operations prior to an outbreak of hostilities.

*b. Support to nonforward-deployed forces.* Support to nonforward-deployed forces involves a contingency situation. A joint U.S. contingency force, with or without allied assistance, deploys to an area without a significant preestablished U.S. support base. It is anticipated that prepositioned war materiel stocks and HNS agreements will be minimal or nonexistent. Initial objectives will be limited. Planning must include a follow-on buildup and sustainment capability. The TCC(A) building block concept permits situation dependent growth and maturity of the TCS(A).

### 1-8. Ground mobile force satellite communications

*a.* The TACSAT Company represents one of the most modern C-E capabilities supporting our Armed Forces. It can provide 16 satellite terminals in the theater as a subnetwork of the Ground Mobile Force Satellite Communications (GMFSC). The GMFSC is a special user network within the DCSC. Its capabilities provide greater flexibility and capacity to command and control forces. Each member of the TACSAT Company plays a significant role in successful accomplishment of the unit mission.

*b.* The focus of this manual is on the employment and operations of the TACSAT Company. The manual also provides information on the TS CCS An/MSQ-114 and the DSCS GMFSC control functions as they influence the operations of the TACSAT Company. Associated subjects essential to successful accomplishment of the TACSAT Company's mission are also discussed in this manual. Chapters 8 through 11 provide a ready reference in communications planning, NBC and EW, rear battle operations, and training. These chapters are not all-inclusive; however, they serve as a point of departure and lead to other documents which provide the detail required. FM 100-16 and FM 11-23 provide information on the functional and organizational environment in which TACSAT companies operate.